Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	17	709/223-232.ccls. and ((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 23:53
L2	16	709/223-232.ccls. and ((round adj trip adj tim$4) rtt) and (((round adj trip adj tim$4) rtt ttl) with (database tabl$4 list$4))	USPAT	OR	ON	2005/12/08 23:53
L3	15	709/223-232.ccls. and latenc$4 and (invers$5 same (hop count bgp))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 23:53
L4	66	709/220-222,238-244.ccls. and BGP and ((first initial$6 start) with (connect$4 table database list$4 request$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 23:53
L5	67	709/220-222,238-244.ccls. and BGP and ((first initial$6 start) with (connect$4 table database list$4 request$4 count$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/08 23:53
L6	43	709/220-222,238-244.ccls. and (BGP same (first initial$6 start))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/09 00:08
L7	0	710/11.ccls. and (BGP same (first initial$6 start))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/12/09 00:08
S1	16	((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt) and hop$6	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 10:56
S2	21	(latenc$5 same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/03 16:24
S3	21	((latenc$5 same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:03

S4	36	((latenc$5 delay$4) same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 13:00
S5	27	((delay$4) same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/03 16:39
S6	15	(((latenc$5 delay$4) same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)) not (((latenc$5 same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)) and (bgp rtt (hop$5 near count$4)) and (ip near address$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 13:00
S7	2	dynamic adj hop$5 adj count$4	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 12:16
S8	2	(dynamic adj hop$5 adj count$4) and dynamic	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/07 16:13
S9	12	(((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt)) and (database tabl$4 list$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 12:39
S10	2	((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt)) same (database tabl$4 list$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/07 14:13
S11	36	(((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))) and ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp hop rtt)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 16:37

S12	2	(((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))) and ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp hop rtt) and inver$5	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 12:57
S13	12	((latenc$5 delay$4) same server same (user computer client member subscriber)) and (database table list$4) and ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp rtt hop$5) and (ip near address$4) and inver$6	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 13:07
S14	1	((latenc$5 delay$4) same server same (user computer client member subscriber)) and (database table list$4) and (inver$6 same ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp rtt hop$5)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 13:20
S15	11	(database table list$4) and (inver$6 same ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp rtt hop$5)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 13:21
S16	36	(((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))) and ((border adj gateway adj protocol) (tim$4 adj2 live) bgp hop ttl)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 15:47
S17	26	((border adj gateway adj protocol) bgp) and ((tim$4 adj2 live) ttl)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 15:48
S18	13	(((border adj gateway adj protocol) bgp) and ((tim$4 adj2 live) ttl)) not ((((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))) and ((border adj gateway adj protocol) (tim$4 adj2 live) bgp hop ttl))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 15:54

S19	4	(((border adj gateway adj protocol) bgp) and ((tim$4 adj2 live) ttl)) and (((border adj gateway adj protocol) bgp (tim$4 adj2 live) ttl) same (database tabl$4 list$4)) not ((((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))) and ((border adj gateway adj protocol) (tim$4 adj2 live) bgp hop ttl))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 16:04
S20	3	cisco.as. and latenc$4 and (hop adj count)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 16:06
S21	2	cisco.as. and latenc$4 and ttl	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/06 16:06
S22	36	((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:03
S23	14	((round adj trip adj tim$4) rtt) and (((round adj trip adj tim$4) rtt count time ttl) with (database tabl$4 list$4)) and latenc$4 and (rout$4 with (updat$4 refreash$4) with (database tabl$4 list$4))	USPAT	OR	ON	2003/10/07 10:20
S24	4	((round adj trip adj tim$4) rtt) and (((round adj trip adj tim$4) rtt ttl) with (database tabl$4 list$4)) and latenc$4	USPAT	OR	ON	2003/10/07 10:25
S25	58	((round adj trip adj tim$4) rtt) and (((round adj trip adj tim$4) rtt ttl) with (database tabl$4 list$4))	USPAT	OR	ON	2005/06/13 08:04
S26	14	((((round adj trip adj tim$4) rtt) with (database tabl$4 list$4))) and (icmp echo$4 ping$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/07 11:36
S27	16	cisco.as. and latenc$4 and (inver$5)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/07 15:58
S28	181	latenc$4 and (invers$5 same (hop count bgp))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:04

S29	2	(latenc$4 and (invers$5 same (hop count bgp))) and (((round adj trip adj tim$4) rtt) and (((round adj trip adj tim$4) rtt count time ttl) same (database tabl$4 list$4)))	USPAT	OR	ON	2003/10/07 16:08
S30	2	(dynamic adj hop$5 adj count$4) and hop$5	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/07 16:29
S31	1	algorithim and latenc$4 and ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp hop rtt)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2003/10/07 17:05
S32	151	laten$4 and (qos (quality adj4 servic$4)) and invers$4	USPAT	OR	ON	2003/10/08 09:56
S33	59	(((round adj trip adj tim$4) rtt) with (database tabl$4 list$4))	USPAT	OR	ON	2004/04/09 10:07
S34	10	cisco.as. and latenc$4 and (invers$5)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/04/09 10:07
S35	49	((((round adj trip adj tim$4) rtt) with (database tabl$4 list$4))) and rout$4	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/04/09 10:08
S36	54	(invers$5 same (hop count bgp)) and (((round adj trip adj tim$4) rtt bgp ttl) same (database tabl$4 list$4))	USPAT	OR	ON	2004/04/09 10:08
S37	8	laten$4 and (qos (quality adj4 servic$4)) and (invers$4 same ((border adj gateway adj protocol) (round adj trip adj tim$4) bgp hop rtt))	USPAT	OR	ON	2004/04/09 10:08
S38	34	invers$5 with hop	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/04/09 10:08
S39	138	((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt) and (database tabl$4 list$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:11
S40	43	(((border adj gateway adj protocol) bgp) with (first initial$4)) and ((round adj trip adj tim$4) hop rtt) and (database tabl$4 list$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:12

S41	65	(((border adj gateway adj protocol) bgp) same (first initial$4)) and ((round adj trip adj tim$4) hop rtt) and (database tabl$4 list$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:12
S42	6	cisco.as. and latenc$4 and bgp	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:12
S43	11	(((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt)))) and (((border adj gateway adj protocol) (round adj trip adj tim$4) bgp hop rtt) same (database tabl$4 list$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:13
S44	18	((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:13
S45	1	((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt).ti.	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:13
S46	11	((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt) and hop$6 and dynamic$4	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:13
S47	10	((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) rtt) and hop$6 and dynamic$4 and compar$6	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/09/22 09:13
S49	21	(US-6449647-$ or US-6415323-$ or US-6625648-$ or US-6154776-$ or US-6052718-$ or US-5678004-$ or US-6298381-$ or US-6292832-$ or US-6256675-$ or US-6130889-$ or US-5917820-$ or US-6118765-$ or US-6615130-$ or US-6591266-$ or US-6546014-$ or US-6078943-$ or US-6795860-$ or US-6735631-$ or US-6665271-$ or US-6650621-$ or US-5862142-$).did.	USPAT	OR	ON	2005/06/12 23:57
S50	10	S49 and (bgp and hop$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 00:33
S51	8	S49 and bgp and hop$4 and initial$4	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 00:43

S52	9	S49 and bgp and hop$4 and ((first initial$4) same request$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 01:02
S53	0	(Boarder adj Gateway adj Protocol) and ((boarder bgp) same hop$4 same (first initial$4) same request$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 01:04
S54	1	(Boarder adj Gateway adj Protocol) and (hop$4 same (first initial$4) same request$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:04
S55	0	(Boarder adj Gateway adj Protocol) and ((boarder bgp) same hop$4 same (first initial$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 01:04
S56	0	(Boarder adj Gateway adj Protocol) and ((boarder bgp) with hop$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 01:04
S57	23	709/223-232.ccls. and ((latenc$5 same server same (user computer client member subscriber)) and (database table list$4) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)) and (bgp rtt (hop$5 near count$4)) and (ip near address$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:03
S58	16	709/223-232.ccls. and ((((border adj gateway adj protocol) bgp) and ((round adj trip adj tim$4) hop rtt)) same (database tabl$4 list$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:03
S59	0	709/223-232.ccls. and (Boarder adj Gateway adj Protocol) and (hop$4 same (first initial$4) same request$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:04
S60	13	709/223-232.ccls. and ((round adj trip adj tim$4) rtt) and (((round adj trip adj tim$4) rtt ttl) with (database tabl$4 list$4))	USPAT	OR	ON	2005/06/13 08:04
S61	13	709/223-232.ccls. and latenc$4 and (invers$5 same (hop count bgp))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/13 08:04

S62	21	(US-6449647-$ or US-6415323-$ or US-6625648-$ or US-6154776-$ or US-6052718-$ or US-5678004-$ or US-6298381-$ or US-6292832-$ or US-6256675-$ or US-6130889-$ or US-5917820-$ or US-6118765-$ or US-6615130-$ or US-6591266-$ or US-6546014-$ or US-6078943-$ or US-6795860-$ or US-6735631-$ or US-6665271-$ or US-6650621-$ or US-5862142-$).did.	USPAT	OR	ON	2005/09/12 13:18
S63	21	S62 and (first initial$6 start)	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/12 13:26
S64	59	709/220-222,238-244.ccls. and BGP and ((first initial$6 start) with (connect$4 table database list$4 request$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/12 17:08
S65	60	709/220-222,238-244.ccls. and BGP and ((first initial$6 start) with (connect$4 table database list$4 request$4 count$4))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/13 10:24
S66	40	709/220-222,238-244.ccls. and (BGP same (first initial$6 start))	USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/09/13 10:32

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File 347:JAPIO Nov 1976-2005/Jul(Updated 051102)
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Set     Items   Description
S1    2653284   REQUEST? ? OR POLL? ? OR QUERY??? OR QUERIE? ? OR PROMPT? ?
               OR COMMUNICATION? ? OR TRANSMISSION? ? OR INSTRUCTION? ? OR -
              COMMAND? ? OR TRANSACTION? ? OR TASK? ?
S2      97346   (INITIAL?? OR FIRST OR 1ST OR PRIMARY OR START??? OR ORIGI-
              NAL OR PRELIMINARY OR OPEN? ? OR OPENING)(7W)S1
S3       9826   (INITIATE? ? OR INITIATING OR INITIATION OR BEGIN???? OR C-
             OMMENC??? OR COMMENCEMENT)(7N)S1
S4        227   HOPCOUNT? ? OR HOP()COUNT? ? OR (NUMBER OR AMOUNT OR QUANT-
              ITY)(2W)HOPS
S5          1*  S4(10N)(BGP OR IBGP OR EBGP OR BORDER()GATEWAY()PROTOCOL)
S6        353   RTT OR (ROUND()TRIP OR ROUNDTRIP)()TIME
S7          0   S2:S3 AND S5 AND S6
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5/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014142309 **Image available**
WPI Acc No: 2001-626520/200172
XRPX Acc No: N01-467000

Latency determining method and apparatus between multiple server and a client in a network, latency metric calculated for subsequent requests and routed to the optimal server

Patent Assignee: SPEEDERA NETWORKS INC (SPEE-N)
Inventor: IYER S; LANKA S

Number of Countries: 093 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200176182	A2	20011011	WO 2001US10524	A	20010330	200172	B
AU 200147925	A	20011015	AU 200147925	A	20010330	200209	

Priority Applications (No Type Date): US 2000657016 A 20000907; US 2000193988 P 20000331
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200176182	A2	E	25	H04L-029/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200147925	A		H04L-029/00	Based on patent WO 200176182

Abstract (Basic): WO 200176182 A2

NOVELTY - The content server receives the request and looks up the latency metric for the client (109) from Local Domain Names Servers (LDNS) (108). The latency metric from the resident Point of Presence (POP) is calculated for subsequent requests of IP addresses using the hop count and Round Trip Time (RTT) data in the latency management table. The address of the optimal POP (101,102) is then sent to the requesting LDNS (108).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an apparatus for determining latency between multiple servers and a client across a network.

USE - Computer networks with multiple servers e.g. Internet.

ADVANTAGE - The IP addresses of clients are masked so latency probes are sent to higher level servers which reduces network traffic required to measure the hops across the network. It also provides more precise dynamic hop count for determining latency between multiple servers and a client than the **hop count** obtained using **Border Gateway Protocol (BGP)**.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic diagram of a network measuring latency between multiple servers and a client.

Local Domain Names Servers (108)
Client (109)
Optimal POP (101,102)
pp; 25 DwgNo 1/6

Title Terms: LATENT; DETERMINE; METHOD; APPARATUS; MULTIPLE; SERVE; CLIENT; NETWORK; LATENT; METRIC; CALCULATE; SUBSEQUENT; REQUEST; ROUTE; OPTIMUM; SERVE
Derwent Class: T01; W01
International Patent Class (Main): H04L-029/00
File Segment: EPI
?

File 348:EUROPEAN PATENTS 1978-2005/Nov W04
(c) 2005 European Patent Office
File 349:PCT FULLTEXT 1979-2005/UB=20051201,UT=20051124
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Set	Items	Description
S1	2106825	REQUEST? ? OR POLL? ? OR QUERY??? OR QUERIE? ? OR PROMPT? ? OR COMMUNICATION? ? OR TRANSMISSION? ? OR INSTRUCTION? ? OR COMMAND? ? OR TRANSACTION? ? OR TASK? ?
S2	141477	(INITIAL?? OR FIRST OR 1ST OR PRIMARY OR START??? OR ORIGINAL OR PRELIMINARY OR OPEN? ? OR OPENING)(7W)S1
S3	54220	(INITIATE? ? OR INITIATING OR INITIATION OR BEGIN???? OR COMMENC??? OR COMMENCEMENT)(7N)S1
S4	1591	HOPCOUNT? ? OR HOP()COUNT? ? OR (NUMBER OR AMOUNT OR QUANTITY)(2W)HOPS
S5	8	S4(10N)(BGP OR IBGP OR EBGP OR BORDER()GATEWAY()PROTOCOL)
S6	2756	RTT OR (ROUND()TRIP OR ROUNDTRIP)()TIME
S7	1	S2:S3(50N)S5(50N)S6

7/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00842438 **Image available**

METHOD AND APPARATUS FOR DETERMINING LATENCY BETWEEN MULTIPLE SERVERS AND A CLIENT

PROCEDE ET APPAREIL PERMETTANT DE DETERMINER LE TEMPS D'ATTENTE ENTRE PLUSIEURS SERVEURS ET UN CLIENT

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Patent and Priority Information (Country, Number, Date):
Patent: WO 200176182 A2-A3 20011011 (WO 0176182)
Application: WO 2001US10524 20010330 (PCT/WO US0110524)
Priority Application: US 2000193988 20000331; US 2000657016 20000907
Designated States:
(Protection type is "patent" unless otherwise stated - for applications prior to 2004)
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 4237

Fulltext Availability:
Detailed Description
Claims

English Abstract
...the resident POP to the requesting client before sending the latency metric to the requesting server. The **BGP hop count** in the Latency Management Table is used for the latency metric upon the **first request** for an IP address. The latency metric is calculated for subsequent requests of IP addresses using the hop count and **RTT** data in the Latency Management Table. Latency metrics from POPs are collected and the inverse relationship of the hop counts in a weighted combination with the **RTT** are used to determine which latency metric indicates the optimal POP. The address of the optimal POP...

Detailed Description
... before sending the latency metric to the requesting server. The Send Latency Metric module 601 uses the **BGP hop count** in the
Latency Management Table 604 for its calculations upon the **first request** for an IP address. The latency metric is calculated for subsequent requests of IP addresses by the Send Latency Metric module 601 using the hop count and **RTT** data obtained from the Receive Response Packet module 602.

10
Latency metrics from POPs are received by...

...latency metrics and uses the inverse relationship of the hop counts in a weighted combination with the **RTT** to determine which latency metric indicates the optimal POP. The Determine Optimal Server module 608 then sends...

Claim
... latency management table;
wherein said latency management table comprises a list of IP addresses along with corresponding **Border Gateway Protocol (BGP) hop counts** , dynamic
hop counts , and Round Trip Times (**RTT**);
looking up the latency metric for said client in said latency management table;
sending said latency metric to the requesting server;
wherein the **BGP hop count** for said client in said latency management
table is used for said latency metric upon the **first request** for said client; and
wherein the dynamic hop count and **RTT** data for said client in said latency management table are used for said latency metric for subsequent ...

...management table;
receiving response packets for said latency probes; and
recording the dynamic hop count and latency (**RTT**) data in said latency management table.
3 The process of Claim 2, wherein periodic latency probes are...

...inverse relationship of the hop counts in said latency metric data in a weighted combination with the **RTT** in said latency metric data to determine which latency metric data indicates the optimal content 0 server...

...latency management table;
wherein said latency management table comprises a list of IP addresses along with corresponding **Border Gateway Protocol (BGP) hop counts** , dynamic
hop counts , and Round Trip Times (**RTT**);
a module for looking up the latency metric for said client in said latency
management table;
a module for sending said latency metric to the requesting server;
wherein the **BGP hop count** for said client in said latency management
table is used for said latency metric upon the **first request** for said client; and
wherein the dynamic hop count and **RTT** data for said client in said latency management table are used for said latency metric for subsequent ...

...response packets for said latency probes; and
a module for recording the dynamic hop count and latency (**RTT**) data in said latency management table.

8 The apparatus of Claim 7, wherein periodic latency probes are...

...inverse relationship of the hop counts in said latency metric data in a weighted combination with the **RTT** in said latency metric data to determine which latency metric data indicates the optimal content server.

11...

...latency management table;
wherein said latency management table comprises a list of IP addresses along with corresponding **Border** Gateway Protocol (**BGP**) **hop**

```
File 275:Gale Group Computer DB(TM) 1983-2005/Dec 05
         (c) 2005 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2005/Dec 02
         (c) 2005 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2005/Dec 05
         (c) 2005 The Gale Group
File  16:Gale Group PROMT(R) 1990-2005/Dec 05
         (c) 2005 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2005/Dec 05
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File 624:McGraw-Hill Publications 1985-2005/Dec 05
         (c) 2005 McGraw-Hill Co. Inc
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         (c) 2005 CMP Media, LLC
File 674:Computer News Fulltext 1989-2005/Oct W2
         (c) 2005 IDG Communications
File 696:DIALOG Telecom. Newsletters 1995-2005/Dec 05
         (c) 2005 Dialog
File 369:New Scientist 1994-2005/Jul W5
         (c) 2005 Reed Business Information Ltd.

Set     Items   Description
S1   11151252   REQUEST? ? OR POLL? ? OR QUERY??? OR QUERIE? ? OR PROMPT? ?
             OR COMMUNICATION? ? OR TRANSMISSION? ? OR INSTRUCTION? ? OR -
            COMMAND? ? OR TRANSACTION? ? OR TASK? ?
S2     405638   (INITIAL?? OR FIRST OR 1ST OR PRIMARY OR START??? OR ORIGI-
            NAL OR PRELIMINARY OR OPEN? ? OR OPENING)(7W)S1
S3     113319   (INITIATE? ? OR INITIATING OR INITIATION OR BEGIN???? OR C-
            OMMENC??? OR COMMENCEMENT)(7N)S1
S4       1448   HOPCOUNT? ? OR HOP()COUNT? ? OR (NUMBER OR AMOUNT OR QUANT-
            ITY)(2W)HOPS
S5         14   S4(10N)(BGP OR IBGP OR EBGP OR BORDER()GATEWAY()PROTOCOL)
S6       2141   RTT OR (ROUND()TRIP OR ROUNDTRIP)()TIME
S7          0   S2:S3(50N)S5(50N)S6
S8         10 , RD S5  (unique items)
```

8/3,K/1 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

02860952 SUPPLIER NUMBER: 130575642 (USE FORMAT 7 OR 9 FOR FULL TEXT)
GSLB Ensures Site Uptime.(global server load balancing)
Tenereillo, Pete
Network Computing, 79
March 17, 2005
ISSN: 1046-4468 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1967 LINE COUNT: 00154

... at each site measures dynamic performance. That could include an RTT (round-trip time), topological footrace or **BGP** (**Border Gateway Protocol**) **hop count** back to the client's DNS server.
5 The GSLB device determines the preferred site. It returns...

8/3,K/2 (Item 2 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

02551936 SUPPLIER NUMBER: 79661062 (USE FORMAT 7 OR 9 FOR FULL TEXT)
RouteScience's PathControl.
Kirby, Rob
Network Magazine, 28
Nov 1, 2001
ISSN: 1093-8001 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 834 LINE COUNT: 00070

TEXT:
...the Internet was but a gleam in some amphibian's eye, it was clear that the shortest **number** of **hops** represented the fastest means of travel between two points. **Border Gateway Protocol** (BGP), at times seeming as archaic as primordial goo, is a student from the old school. A ...

8/3,K/3 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2005 The Gale Group. All rts. reserv.

02357641 SUPPLIER NUMBER: 58237178 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Multihoming With BGP4.(routing protocol)(Technology Information)
Morrissey, Peter
Network Computing, 117
Dec 13, 1999
ISSN: 1046-4468 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 2768 LINE COUNT: 00213

... Distance Vector Protocol, but with a key difference. A Distance Vector Protocol chooses routes based on the **hop count** (or routers traversed) and link speeds; **BGP** , in contrast, chooses a route that traverses the least number of Autonomous Systems (AS). As a routing...

...path to a destination network. One AS can contain multiple routers, so it's possible the actual **hop count** is higher than the AS path indicates.
However, with **BGP** 's built-in flexibility, you can enhance this default behavior. For instance, you may want to control...

8/3,K/4 (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02192462 SUPPLIER NUMBER: 20132689 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Load balancing under Unix.(Enterprise Var) (Technology Information)
Harlow, Jim
Network VAR, v6, n1, p26(5)
Jan, 1998
ISSN: 1082-8818 LANGUAGE: English RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3766 LINE COUNT: 00290

... in increasing Web application response time. Interior Gateway Protocols (IGPs) need to be tuned in conjunction with **BGP** to reduce the **number** of **hops** , and make the applications more specially tuned.
Using CGI load balancing, you can build some redundancy into...

8/3,K/5 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

09889738 Supplier Number: 87508330 (USE FORMAT 7 FOR FULLTEXT)
IP packet management hits a traffic jam: end users need to monitor IP network performance, but too many protocols complicate the problem, say experts. (News Analysis: IP Traffic Management).
Biddlecombe, Elizabeth
CommunicationsWeek International, p12(1)
June 3, 2002
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 856

... BGP is no longer efficient for routing
This situation is further complicated by the prevalence of the **border gateway protocol** (**BGP**). **BGP** determines the least **number** of router **hops** a packet must make to get to its destination. These days, say analysts, this is no longer...

8/3,K/6 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

07614478 Supplier Number: 62241465 (USE FORMAT 7 FOR FULLTEXT)
Product Spotlight: Web Content Distributor.(Company Business and Marketing)
Greenfield, David
Network Magazine, pNA
Jan 1, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 666

... level Web site address with the anycast address. The network determines the closest server based on the **number** of **hops** as returned by the **Border Gateway Protocol** (**BGP**), the routing protocol used to communicate between large organizations on the Internet. The user's request is...

8/3,K/7 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

14079555 SUPPLIER NUMBER: 80367966 (USE FORMAT 7 OR 9 FOR FULL TEXT)
A new breed of route optimizer.
Passmore, David

Business Communications Review, 31, 11, 18(2)
Nov, 2001
ISSN: 0162-3885 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1610 LINE COUNT: 00135

... and, potentially, thousands of address prefix destinations on the Internet. This information is then used along with **BGP hop counts** to calculate optimal paths, which are fed to

8/3,K/8 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2005 The Gale Group. All rts. reserv.

13474800 SUPPLIER NUMBER: 75145920 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Today's Internet Can't Scale.(Technology Information)
Borthick, Sandra
Business Communications Review, 31, 5, 28
May, 2001
ISSN: 0162-3885 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 3127 LINE COUNT: 00248

... will explore the longer alternate(s).
Nevertheless, throttling back on these routing details, as well as the **number** of routing **hops** traveled by **BGP** routing updates, are being considered as near-term fixes, according to Cathy Wittbrodt, vice president, architecture with...

8/3,K/9 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2005 CMP Media, LLC. All rts. reserv.

01284387 CMP ACCESSION NUMBER: NWC20050317S0022
GSLB Ensures Site Uptime
Pete Tenereillo
NETWORK COMPUTING, 2005, n 1605, PG79
PUBLICATION DATE: 050317
JOURNAL CODE: NWC LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Workshop - Global Server Load Balancing
WORD COUNT: 1847

... at each site measures dynamic performance. That could include an RTT (round-trip time), topological footrace or **BGP** (**Border Gateway Protocol**) **hop count** back to the client's DNS server.

5 The GSLB device determines the preferred site. It returns...

8/3,K/10 (Item 2 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext
(c) 2005 CMP Media, LLC. All rts. reserv.

01206504 CMP ACCESSION NUMBER: NWC19991213S0028
Multihoming With BGP4
Peter Morrissey
NETWORK COMPUTING, 1999, n 1025, PG117
PUBLICATION DATE: 991213
JOURNAL CODE: NWC LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: Workshop - Infrastructure
WORD COUNT: 2607

... Distance Vector Protocol, but with a key difference. A Distance

Vector Protocol chooses routes based on the **hop count** (or routers traversed) and link speeds; **BGP** , in contrast, chooses a route that traverses the least number of Autonomous Systems (AS). As a routing...

...path to a destination network. One AS can contain multiple routers, so it's possible the actual **hop count** is higher than the AS path indicates.

However, with **BGP** 's built-in flexibility, you can enhance this default behavior. For instance, you may want to control...

```
File   8:Ei Compendex(R) 1970-2005/Nov W4
         (c) 2005 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2005/Nov
         (c) 2005 ProQuest Info&Learning
File  65:Inside Conferences 1993-2005/Dec W1
         (c) 2005 BLDSC all rts. reserv.
File   2:INSPEC 1898-2005/Nov W4
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File  94:JICST-EPlus 1985-2005/Oct W1
         (c)2005 Japan Science and Tech Corp(JST)
File   6:NTIS 1964-2005/Nov W4
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
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         (c) 2005 INIST/CNRS
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  34:SciSearch(R) Cited Ref Sci 1990-2005/Nov W4
         (c) 2005 Inst for Sci Info
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/Oct
         (c) 2005 The HW Wilson Co.
File 266:FEDRIP 2005/Nov
         Comp & dist by NTIS, Intl Copyright All Rights Res
File  95:TEME-Technology & Management 1989-2005/Oct W5
         (c) 2005 FIZ TECHNIK

Set     Items   Description
S1    4438404   REQUEST? ? OR POLL? ? OR QUERY??? OR QUERIE? ? OR PROMPT? ?
               OR COMMUNICATION? ? OR TRANSMISSION? ? OR INSTRUCTION? ? OR -
              COMMAND? ? OR TRANSACTION? ? OR TASK? ?
S2      61675   (INITIAL?? OR FIRST OR 1ST OR PRIMARY OR START??? OR ORIGI-
              NAL OR PRELIMINARY OR OPEN? ? OR OPENING)(7W)S1
S3      12533   (INITIATE? ? OR INITIATING OR INITIATION OR BEGIN???? OR C-
              OMMENC??? OR COMMENCEMENT)(7N)S1
S4       2163   HOPCOUNT? ? OR HOP()COUNT? ? OR (NUMBER OR AMOUNT OR QUANT-
              ITY)(2W)HOPS
S5          4   S4(10N)(BGP OR IBGP OR EBGP OR BORDER()GATEWAY()PROTOCOL)
S6       4061   RTT OR (ROUND()TRIP OR ROUNDTRIP)()TIME
S7          0   S2:S3 AND S5 AND S6
S8          2 . RD S5  (unique items)
```

8/5/1 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

07354328 E.I. No: EIP05169050973
Title: BGP-RCN: Improving BGP convergence through root cause notification
Author: Pei, Dan; Azuma, Matt; Massey, Dan; Zhang, Lixia
Corporate Source: Department of Computer Science UCLA, Los Angeles, CA 90095, United States
Source: Computer Networks v 48 n 2 Jun 6 2005. p 175-194
Publication Year: 2005
CODEN: CNETDP ISSN: 1389-1286
Language: English
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)
Journal Announcement: 0504W4
Abstract: This paper presents a new mechanism, called BGP with root cause notification (BGP-RCN), that provides an upper bound of O(d) on routing convergence delay for **BGP** , where d is the network diameter as measured by the **number** of AS **hops** . **BGP** -RCN lets each routing update message carry the information about the specific cause which triggered the update message. Once a node v receives the first update message triggered by a link failure, v can avoid using any paths that have been obsoleted by the same failure. The basic approach in BGP-RCN is applicable to path vector routing protocols in general. Our analysis and simulation show that BGP-RCN can achieve substantial reduction in both BGP convergence time and the total number of intermediate route changes. copy 2004 Elsevier B.V. All rights reserved. 30 Refs.